

REMARKS/ARGUMENTS

This Amendment & Response and the following remarks are intended to fully respond to the office action mailed January 3, 2008. In that Office Action, claims 1-28 were examined, and all claims were rejected. More specifically, claims 1, 3, 6-7, 11, 16-17, 21, and 25-26 were rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 6,985,243 to Matsueda. Claims 2, 4-5, 8-10, 12-15, 18-20, 22-24, and 27-28 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsueda in view of U.S. Patent No. 6,983,462 to Savov.

Claims 1, 4, 5, 8-12, 14, 17, 18, 20-22, 26, and 27 are being amended herewith. Claims 2, 3, and 16 are being canceled and no claims are newly added. Reconsideration of the claims, as originally filed, and subsequently amended is respectfully requested.

Interview Summary

The undersigned would like to thank Examiners Vincent Rudolf and Supervisory Examiner Gabriel Garcia for the in-person interview conducted on March 10, 2008. During the interview, the undersigned discussed documents that have been submitted under seal in the present application for consideration by Examiner Rudolf. As noted in the interview, the documents relate to litigation involving the assignee of the present application, Microsoft Corporation. The documents are confidential and therefore cannot be submitted under ordinary IDS procedures. The undersigned provided Examiner Rudolf with a brief explanation of a number of the documents.

The undersigned also discussed some proposed claim amendments with Examiner Rudolf. The claim amendments being made herein differ from the proposed claim amendments, most notably by the addition of language (similar to claim 29 in the proposed claim amendments) in independent claims 1, 11, 20, and 21. The undersigned also discussed the differences between the Musante reference and the proposed claim amendments, including claim 29, with Examiner Rudolf who indicated that the language of claim 29 appeared to overcome the Musante reference, but a new search and further consideration was required.

Objection to Specification

The title has been amended to address the objection to the title. The amended title recites "Use of a Scalable Print Spooler For Handling Print Requests." Applicants respectfully request the withdrawal of the objection to the title.

Claim Rejections – 35 U.S.C. § 102(e)

Claims 1, 3, 6-7, 11, 16-17, 21, and 25-26 were rejected under 35 U.S.C. § 102(e) as being anticipated by Musante. Applicants respectfully traverse this rejection, because Musante fails to teach all of the elements of the claims. Specifically, Musante fails to teach the use of asynchronous remote procedure calls for print requests, which prevent blocking of an application thread from performing other processing.

In embodiments, the present invention provides a system and method that allows a print server to service a large number of client computers having application programs that may need to simultaneously print data. A server computer, in embodiments, implements a server print spooler for coordinating the printing, on a number of printers, of data sent to the print server by the client computers. The client computers can communicate print requests originating from applications to the print server using asynchronous remote procedure calls (RPC). The server will send a response to the client immediately, to prevent the originating application from being blocked from other processing. After the print request is processed, the server sends a second response to the client indicating completion of the print request. This feature allows the print server to be scalable to service a large number of clients with a large number of applications. Without asynchronous RPC, when a print server is slow in processing print requests, such as is the case when processing requests for a large number of clients, each client and originating application is blocked from performing further processing.

The office action asserts that Matsueda anticipates independent claims 1, 11, 20, and 21 of the present application. Matsueda is directed to a print server system where a server and a client both have an image spooler which can be used to store an image for printing. A user can indicate which spooler is used to print the image, or a server may be configured to automatically make the determination. Matsueda does not however make any mention of using asynchronous

RPC. Independent claims 1, 11, 20, and 21 of the present application, specifically recite the use of asynchronous RPC for receiving a print request. Moreover, the independent claims are currently amended to further recite the benefits of using asynchronous RPC, namely that in response to receiving an asynchronous RPC, a first response is sent to avoid blocking an application thread from performing other processing. Matsueda makes no mention of such a feature.

Moreover, it is unlikely that the system described by Matsueda uses asynchronous RPC for transmitting printing requests from clients, because the clients described in Matsueda appear to implement the Windows® operating system. See Matsueda, col. 5, lines 11-16 (“In Windows OS (a trade mark of Microsoft Corporation), the drawing means of the OS corresponds to Win32API.”). The Windows® operating system did not provide for asynchronous RPC for transmitting printing requests at the time Matsueda was filed, namely February 24, 2000.

As described above, Matsueda fails to teach all of the elements of independent claims 1, 11, 20, and 21 making the claims allowable over Matsueda. Claims 3, 6-7, 11, 16-17, 21, and 25-26 depend upon one of claims 1, 11, 20, and 21 and are allowable for at least the same reasons.

Claim Rejections – 35 U.S.C. § 103

Claims 2, 4-5, 8-10, 12-15, 18-20, 22-24, and 27-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Musante in view of Savov. Applicants respectfully traverse this rejection, because the combination of Musante and Savov fail to teach all of the elements of claims 2, 4-5, 8-10, 12-15, 18-20, 22-24, and 27-28, which depend upon one of claims 1, 11, 20, and 21. As noted above, Musante fails to teach the use of asynchronous remote procedure calls for print requests, which prevent blocking of an application thread from performing other processing and Savov does not compensate for the deficiency in Musante.

Savov teaches a method of managing a request queue. Savov describes the use of blocking semaphores to manage the request queue. Savov describes a process by which a request queue can be resized to queue additional requests. Savov however makes no mention of using asynchronous remote procedure calls in a printing system to prevent blocking of an

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application thread requesting printing from performing other processing. Therefore, the combination of Savov and Musante fail to teach all of the elements of the claims, making claims 2, 4-5, 8-10, 12-15, 18-20, 22-24, and 27-28 patentable over their combination.

Conclusion

This Amendment & Response fully responds to the office action mailed on January 3, 2008. Still, that Office Action may contain arguments and rejections that are not directly addressed by this Amendment & Response because they are rendered moot in light of the preceding arguments in favor of patentability. Hence, failure of this Response to directly address an argument raised in the Office Action should not be taken as an indication that the Applicant believes the argument has merit. Furthermore, the claims of the present application may include other elements, not discussed in this Amendment & Response, which are not shown, taught, or otherwise suggested by the art of record. Accordingly, the preceding arguments in favor of patentability are advanced without prejudice to other bases of patentability.

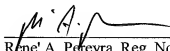
It is believed that no fees, are due with this Amendment & Response. However, the Commissioner is hereby authorized to charge any deficiencies or credit any overpayment with respect to this patent application to deposit account number 13-2725.

In light of the above remarks and amendments, it is believed that the application is now in condition for allowance and such action is respectfully requested. Should any additional issues need to be resolved, the Examiner is requested to telephone the undersigned to attempt to resolve those issues.

Respectfully submitted,

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